

REMARKS

Applicants have amended claim 1 in this response. Claims 1-2, 4-5, and 7-18 are pending in this application.

In the December 1, 2004 Office Action, the Examiner rejected claims 1-2, 4-5, and 7-18 (including independent claims 1, 14, and 17) under 35 U.S.C. §103(a) as unpatentable over Martinsky (U.S. Pat. No. 6,101,946) in view of Van Breeman et al. (U.S. Pat. No. 4,080,607), further in view of Furrow et al. (U.S. Patent 5,615,958). The Examiner asserts that one of ordinary skill in the art would have been motivated to “modify Martinsky by using the printhead assembly of Van Breeman et al. because the Van Breeman et al. printhead assembly is disclosed as provid[ing] accurate reassembly of the printhead after cleaning or refurbishing.” Recognizing that Martinsky and Van Breeman are not enough, the Examiner cited Furrow and stated that “it would have been obvious to substitute the channels in the printhead of Van Breeman for dowel pins, as disclosed by Furrow et al.” Applicants submit that the combination of Martinsky, Van Breeman, and Furrow does not disclose all of the features of Applicants’ claims. Applicants respectfully request reconsideration.

As the Examiner knows, a prima facie case of obviousness requires a suggestion or motivation to combine, a reasonable expectation of success, and a teaching or suggestion of all claim limitations. (MPEP §2143.) According to MPEP 2143.01, a rejection under 35 U.S.C. 103(a) must fail when the proposed combination cannot be achieved, renders the prior art unsatisfactory for its intended purpose, and/or changes the operation or principle of a reference. For all of these reasons, the proposed combination of Furrow with Martinsky and Van Breeman fails at least the “motivation to combine” and “reasonable expectation of success” elements of the 35 U.S.C. 103(a) prima facie case of obviousness. As Applicants shall show, the “teaching of all claim limitations” also fails to be satisfied by the proposed combination.

The cited portion of the Furrow patent discloses a mount for a cartridge in a printer. (Col. 6, ll. 31-34) Figures 11A through 11C show the mounting of a cartridge (designated “C”) to end mounts that “comprise upstanding pins 136 each terminating at their upper ends in a ball 138.” (Col. 6, ll. 44-47) Each joint includes only a single pin 136 terminating in a ball 138.

Further, as shown in Figures 11A through 11C in Furrow, the mount that results can swivel about an axis of rotation. *Compare* Figures 11A, 11B, and 11C. Furrow states:

Thus, the spring fingers of brackets 128 and 130 maintain the ball 138 in engagement along the bearing surface 126, enabling cartridge C to **pivot or oscillate** about the axis A—A under control of the oscillator mechanism previously described.
(Col. 6, ll. 54-58) (emphasis added)

Unlike Applicants' independent claims 1 and 14, the Furrow patent does not disclose the use of "two linear hardened dowel pins" to contact each of the ball mounts, i.e., "*wherein each of the ball mounts contacts two linear hardened dowel pins, such that if the ball mount is on one of the bracket or printhead, the dowel pins are in the other of the printhead or the bracket*". Furrow, instead, discloses only a single pin that terminates in an attached ball. In addition, the resulting system in Furrow is not a semi-kinematic mounting system, such as that of independent claims 1 and 14. As set forth above, the mounting system of Furrow allows the cartridge to "pivot or oscillate" about an axis of rotation. Thus, contrary to the Examiner's proposition, Furrow cannot be combined with Martinsky and Van Breeman to form the claimed invention.

Applicants' response dated August 30, 2004 distinguished independent claims 1 and 14 from the combination of Martinsky and Van Breeman. Applicant incorporates those comments herein. In particular, the Van Breeman patent does not disclose the use of "dowel pins" to contact the ball mounts.

In addition, the Van Breeman patent fails to disclose "hardened" contact points for the mounting system, as recited in Applicants' independent claims 1 and 14. Applicants suggest the use of such hardened materials at the contact points may be desirable so that the components can withstand contact stresses induced by printhead attachment and instrument operation without deforming. (*See* application, page 9, lines 1-3)

Van Breeman discloses balls 48-50 that are made from "hard metal." (Col. 2, ll. 19-22) The lower portions of the balls 48-50 are mounted on brackets 80-82 and charge plate 59. (*See* Figure 23) The charge plate 59 is made from "ceramic, plastic or other insulative material," or from "conductive material with an insulative coating." (Col. 5, l. 67 to col. 6, l. 3) The upper portions of the balls 48-50 are mounted on rests 45-47, which are part of housing 61. The housing 61 is made from acrylic plastic. (Col. 4, ll. 44-57) Van Breeman makes clear that each ball 48-50 is made from hard material, that the housing 61 is made from acrylic plastic, and that

the charge plate 59 is made from ceramic, plastic or other insulative material. However, Van Breeman is silent as to the materials of the rests 45-47 and the brackets 80-82. Thus, Van Breeman fails to disclose Applicants' claimed two "hardened" materials to form the contact points of the mounting system.

Thus, as set forth above, the cited prior art, either alone or in combination, does not disclose all of the features of Applicants' independent claims 1 and 14. Therefore, Applicants submit that independent claims 1 and 14, and the claims that depend from those claims, are in condition of allowance. Applicants' failure to address the Examiner's rejections of the dependent claims should not be construed as an acquiescence to such rejections, but a recognition that such rejections are moot based on the dependency from an allowable independent claim.

With respect to independent claim 17, the Examiner purportedly rejected these claims as unpatentable over Martinsky in view of Van Breeman et al., and further in view of Furrow. However, the Examiner cited Furrow only for its supposed disclosure of "dowel pins." Claims 17 and 18 contain no features directed to dowel pins.

As set forth in Applicants' previous response, Applicants' independent claim 17 recites that the mounting system be "non-adjustable." Van Breeman discloses a system that has adjustments built into one side of the mounting system. (*See* August 30, 2004 Response) In Applicants' independent claim, the mounting system itself is "non-adjustable" so that the two pieces can simply be brought together and clamped. Such a non-adjustable approach can be repeated more easily than an adjustable approach.

The cited prior art lacks a teaching of Applicants' independent claim 17 that includes a "non-adjustable" mounting system, and Applicants thus traverse the Examiner's rejection of independent claim 17, and dependent claim 18, which depends therefrom. Therefore, reconsideration and allowance of these claims is respectfully requested.

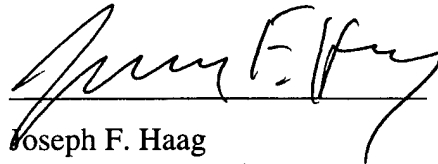
For the reasons stated above, Applicants believe that the claims now pending in this application are allowable. Applicants respectfully request reconsideration and allowance.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph F. Haag", written over a horizontal line.

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